UNITED STATES PATENT AND TRADEMARK OFFICE

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WOLF GREENFIELD (Microsoft Corporation)
C/O WOLF, GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206

EXAMINER
LIU, LIN

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _01 October 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-21_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-21_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to communications filed on 10/01/2007.

Claims 1-21 are pending and have been examined.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

4.   **Claims 1, 2, 4-11, 13-18 and 21** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Rune (publication no.: US 2003/0060222 A1)** in view of

Melpignano (Patent no.: US 7,193,989 B2) and **Virtanen (PGPUB: US 2003/0124978**

A1).

       With respect to **claim 1,** Rune teaches a system for discovering and connecting

to a remote device by a local device, the system comprising tangible computer-readable

media having:

an inquiry scan cache that is refreshed by a periodic inquiry scan (Rune, page 2, paragraph 30, noted that it is an inherent feature for inquiry scan transceiver to have a cache);

a page scan cache (Rune, page 3, paragraph 32, noted that it is an inherent feature for page scan transceiver 530 to have a cache); and

a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan.

However, Rune does not explicitly teach a method of refreshing the page scan by way of an attempt to connect to at least one remote device and a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan.

In the same field of endeavor, Melpignano teaches a method of refreshing the page scan by way of an attempt to connect to at least one remote device (Melpignano: col. 10, lines 45-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of refreshing the page scan by way of an attempt to connect to at least one remote device as taught by Melpignano in Rune's invention in order to for a Bluetooth device to establish one or more connections as quickly as possible when entering an unknown environment (Melpignano: col. 10, lines 60-63).

However, the combined method of Rune and Melpignano does not explicitly teach a method of providing a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan.

In the same field of endeavor, Virtanen teaches a method providing a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan (Virtanen: fig. 2, 4-5, page 2, paragraphs 20-21, page 3, paragraphs 32-33).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of providing a list of visible remote devices as taught by Virtanen in the combined method of Rune and Melpignano invention in order to provide a visible list of devices within the vicinity of user's device (Virtanen: page 3, paragraph 32).

With respect to **claim 2,** Rune teaches the system of claim 1 wherein the remote device provides a Network Access Point (NAP) service (Rune, page 3, paragraph 32).

With respect to **claim 4,** Rune teaches the system of claim 1, further comprising an automatic configuration service component that polls for the list of visible remote devices and the page scan is performed in response to the configuration service polling for the list (Rune, page 3, paragraph 37, noted polling the slave unit).

With respect to **claim 5,** Rune teaches the system of claim 1 wherein the page scan cache holds a finite number of entries and is associated with an expiration policy (Rune, page 3, paragraph 37).

With respect to **claim 6,** Rune teaches the system of claim 1 wherein the inquiry scan cache is additionally updated by way of an attempt by a remote device to connect to the local Bluetooth device (Rune, page 2, paragraph 31 and page 3, paragraph 37).

With regard to **claims 7 and 8,** the limitations of these claims are substantially the same as those in claim 1. Therefore the same rationale for rejecting claim 1 is used to reject claims 7 and 8. By this rationale **claims 7 and 8** are rejected.

With respect to **claim 9,** Rune teaches the method of claim 7 wherein the page scan cache holds a finite number of entries, the method further comprising, for each entry added to the page scan cache:

setting an expiration time for the entry (Rune, page 3, paragraph 37);

if the periodic inquiry scan does not reveal the entry, reducing the expiration time (Rune, page 1, paragraph 11); and

if the expiration time has occurred, removing the entry from the page scan cache (Rune, page 1, paragraph 11).

With respect to **claim 10,** Rune teaches the method of claim 7, further comprising:

if a remote device attempts to connect to the local device, adding an entry for the remote device to the inquiry scan cache (Rune, page 3, paragraph 33, noted that after

obtaining the information the Bluetooth roaming device may transmits to the page scan transceiver).

With respect to **claim 11** the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 11. By this rationale **claim 11** is rejected.

With respect to **claim 13,** Rune teaches the method of claim 7 wherein forming a list of visible remote devices is in response to polling by an automatic configuration service (Rune page 3, paragraph 37, polling the slave unit).

Regarding **claims 14 and 15,** the limitations of these claims are substantially the same as those in claim 1, but rather in a computer-readable medium form. Therefore the same rationale for rejecting claim 1 is used to reject claims 14 and 15. By this rationale **claims 14 and 15** are rejected.

Regarding **claim 16** the limitations of this claim are substantially the same as those in claim 9. Therefore the same rationale for rejecting claim 9 is used to reject claim 16. By this rationale **claim 16** is rejected.

Regarding **claim 17** the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 17. By this rationale **claim 17** is rejected.

Regarding **claim 18** the limitations of this claim are substantially the same as those in claim 1, but rather in a computer-readable medium form. Therefore the same rationale for rejecting claim 1 is used to reject claim 18. By this rationale **claim 18** is rejected.

Regarding **claim 21** the limitations of this claim are substantially the same as those in claim 4. Therefore the same rationale for rejecting claim 4 is used to reject claim 21. By this rationale **claim 21** is rejected.

5.   **Claims 3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rune (publication no.: US 2003/0060222 A1)** in view of **Melpignano (Patent no.: US 7,193,989 B2)** and **Virtanen (PGPUB: US 2003/0124978 A1)** and further in view of **Miklos et al. (publication no.: US 2003/0092386 A1).**

With respect to **claim 3,** the combined method of Rune, Melpignano and Virtanen teaches all the claimed limitations, except that they do not explicitly teach a method of providing a Group Ad-hoc Network (GN) service.

In the same field of endeavor, Miklos teaches a method of providing a Group Ad-hoc Network (GN) service (Miklos, page 2, paragraph 22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of providing a Group Ad-hoc Network (GN) service as taught by Miklos in the combined method of Rune, Melpignano and Virtanen invention in order to allow the peer-to-peer characteristics of the network and offer location-based services that address specific communities of users.

With respect to **claim 12** the limitations of this claim are substantially the same as those in claim 3. Therefore the same rationale for rejecting claim 3 is used to reject claim 12. By this rationale **claim 12** is rejected.

6.   **Claims 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Rune (publication no.: US 2003/0060222 A1)** in view of **Melpignano (Patent**

no.: US 7,193,989 B2) and **Virtanen (PGPUB: US 2003/0124978 A1)** and further in

view of **Choi (patent no.: US 6,879,570 B1).**

With respect to **claim 19**, the combined method of Rune, Melpignano and

Virtanen teaches all the claimed limitations, except that they do not explicitly teach a

method of providing a user-mode Bluetooth PAN service component.

In the same field of endeavor, Choi teaches a method of providing a user-mode

Bluetooth PAN service component (Choi, col. 3, lines 25-42).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to incorporate the method providing a user-mode Bluetooth

PAN service component as taught by Choi in the combined method of Rune,

Melpignano and Virtanen invention in order to check whether other Bluetooth devices

are present in the communicable range of the Bluetooth device (Choi, col. 1, lines 49-

63).

With respect to **claim 20**, the combined method of Rune, Melpignano and

Virtanen teaches all the claimed limitations, except that they do not explicitly teach a

method of providing a kernel-mode Bluetooth PAN service component.

In the same field of endeavor, Choi teaches a method of providing a kernel-mode

Bluetooth PAN service component (Choi, col. 3, lines 43-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to incorporate the method providing a kernel-mode Bluetooth

PAN service component as taught by Choi the combined method of Rune, Melpignano and Virtanen invention in order to check whether other Bluetooth devices are present in the communicable range of the Bluetooth device (Choi, col. 1, lines 49-63).

Response to Arguments

7.   Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

       If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

       Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./

/Lin Liu/
Examiner, Art Unit 2145

                                        /Jason D Cardone/
                                        Supervisory Patent Examiner,
                                        Art Unit 2145